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     (FILE 'HOME' ENTERED AT 11:32:05 ON 08 AUG 2005)

     FILE 'MEDLINE, HCAPLUS, BIOSIS, EMBASE, WPIDS, AGRICOLA' ENTERED AT
     11:32:39 ON 08 AUG 2005
L1          1888 S PRRSV
L2          2637 S PORCINE(3A)REPRODUCTI?(3A)RESPIRAT?(5A)VIRUS?
L3            58 S MYSTERY(3A)SWINE#(3A)DISEASE?
L4            59 S MYSTERY(5A)SWINE#(5A)DISEASE?
L5            12 S BLUE(3A)EAR?(5A)SYNDROME#
L6          1155 S BLUE(3A)EAR?
L7            75 S L6 (5A)(SYNDROME? OR DISEASE? OR PORCINE? OR PIG?)
L8           488 S SWINE(5A)INFERTILITY(5A)RESPIRAT?
L9            28 S PORCINE(5A)EPIDEMIC?(5A)ABORT? (5A) RESPIRAT?
L10            0 S WABASH (5A) (SYNDROME? OR DISEASE? OR DISORDER?)
L11            0 S WABASH (L) (SYNDROME? OR DISEASE? OR DISORDER?)
L12           39 S MYSTERY(5A)PIG?
L13          277 S SWINE#(5A)PLAGUE?
L14         3246 S L1 OR L2 OR L4 OR L5 OR L7 OR L8 OR L9 OR L12 OR L13
L15           67 S L14 AND (VR2385 OR VR(A)2385)
L16            1 S L15 AND PRIMER?
L17            9 S L15 AND PCR
L18            5 S L15 AND AMPLIF?
L19            1 S L15 AND POLYMERAS? (5A)CHAIN(5A)REACTION?
L20            1 S L15 AND HYBRIDI?
L21            1 S L15 AND CHAIN(5A)REACTION?
L22           10 S L16-L21
L23            5 DUP REM L22 (5 DUPLICATES REMOVED)

=> d ibib abs 123 1-5

L23  ANSWER 1 OF 5  BIOSIS  COPYRIGHT (c) 2005 The Thomson Corporation  on STN
ACCESSION NUMBER:   2001:462953  BIOSIS
DOCUMENT NUMBER:    PREV200100462953
TITLE:              Sequence analysis of two membrane-associated protein genes
                    of a porcine reproductive and
                    respiratory syndrome virus, Taiwan MD-001
                    strain.
AUTHOR(S):          Ling-Ling Chueh [Reprint author]; Kan-Hung Lee
CORPORATE SOURCE:   National Taiwan University, Graduate Institute of
                    Veterinary Medicine, Taipei, 106, Taiwan
                    chuehlin@ccms.ntu.edu.tw
SOURCE:             Journal of the Chinese Society of Veterinary Science,
                    (June, 2001) Vol. 27, No. 2, pp. 80-88. print.
                    CODEN: CKSCDN. ISSN: 0253-9179.
DOCUMENT TYPE:      Article
LANGUAGE:           English
OTHER SOURCE:       Genbank-AF121131
ENTRY DATE:         Entered STN: 3 Oct 2001
                    Last Updated on STN: 25 Feb 2002
AB   Two membrane associated protein genes, a putative glycosylated envelope
     protein (E) and an unglycosylated membrane protein (M), of porcine
     reproductive and respiratory syndrome virus (
     PRRSV) from a local isolate (MD-001 strain) were cloned and
     analyzed. After priming with specific oligonucleotides, the cDNA covering
     the E and M genes of the PRRSV were copied. The sequencing
     results of the obtained cDNA clones revealed two open reading frames
     (ORFs) which consisted of 603 and 525 nucleotides, respectively. A
     comparison of the sequences with other PRRSV isolates from
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around the world confirmed that the two ORFs were the ORF 5 (E gene) and ORF 6 (M gene) of the **PRRSV** genome. Sixteen overlapping base pairs were found between the coding region of E and M genes. The nucleotide homology with corresponding ORFs of the European **PRRSV** isolates (Lelystad, Boxmeer, PRRS-OLOT) varied from 52.1% to 53.7% for E gene, and 63.8% to 64.8% for M gene. However, comparison of the Taiwanese M gene sequence with the American (VR2332, **VR2385**, 16244B, MN1), Canadian (IAF-Exp91), and Asian (EDRD-1 and CH-1a) isolates revealed very high degrees of homology (83.1% to 88.7% for E gene and 91.6% to 94.5% for M gene). Analysis of the deduced amino acid for E and M genes revealed that both proteins were very hydrophobic (42.5% for ORF5 and 43.7% for ORF6) which was consistent with their membrane-spanning character.

L23 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:226636 HCAPLUS
DOCUMENT NUMBER: 131:40311
TITLE: Identification and cloning of M and N protein gene of **porcine reproductive** and **respiratory** syndrome **virus**
AUTHOR(S): Cai, Jiali; Jiang, Ping; Cai, Baoxiang; Ma, Zhiyong
CORPORATE SOURCE: Fac of Anim Med, Nanjing Agri Uni, Nanjing, 210095, Peop. Rep. China
SOURCE: Zhongguo Shouyi Xuebao (1999), 19(1), 3-6
CODEN: ZSXUF5; ISSN: 1005-4545
PUBLISHER: Zhongguo Shouyi Xuebao Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB Matrix membrane (M) protein and nucleocapsid (N) protein of **PRRSV** are two important structural proteins. **Primers** for RT-**PCR** were designed on the basis of **VR2385** isolate sequence of US **PRRSV** which **amplified** the entire protein coding regions of the M and N genes. Unique restriction sites (Eco RI and Bam HI) at the termini of the **PCR** products were introduced. A **PCR** product with the expected size of about 950 bp was obtained from a modified live **PRRSV**. The **PCR** product of the M and N genes from **PRRSV** was then digested with Eco RI and Bam HI, purified and cloned into vector PBV220 and one recombinant PBVMN was constructed. The M and N gene of PBVMN was further subcloned into vector pSK+ (pBluescript SK+) and one recombinant PBSMN was obtained. A partial sequence of PBSMN containing the full length of M and N genes was identified with an automated DNA sequencer. The report provides some valuable materials for investigation of M and N protein antigenic properties and mol. characteristics as well as genomic diagnostic technique of **PRRSV**.

L23 ANSWER 3 OF 5 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 1998214325 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9553709
TITLE: Differentiation between **porcine reproductive** and **respiratory** syndrome **virus** isolates by restriction fragment length polymorphism of their ORFs 6 and 7 genes.
AUTHOR: Gagnon C A; Dea S
CORPORATE SOURCE: Centre de Recherche en Virologie, Institut Armand-Frappier, Universite du Quebec, Laval.
SOURCE: Canadian journal of veterinary research = Revue canadienne de recherche veterinaire, (1998 Apr) 62 (2) 110-6.
Journal code: 8607793. ISSN: 0830-9000.
PUB. COUNTRY: Canada
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-U64928; GENBANK-U64929; GENBANK-U64930; GENBANK-U64931; GENBANK-U64932; GENBANK-U64933; GENBANK-U64934; GENBANK-U64935
ENTRY MONTH: 199805
ENTRY DATE: Entered STN: 19980611
Last Updated on STN: 20000303
Entered Medline: 19980529

AB Three distinct antigenic profiles were identified by comparing the reactivities of 15 Canadian field isolates, the attenuated U.S. vaccine (Ingelvac MLV) strain and 2 European reference strains (Lelystad and Weybridge) of the **porcine reproductive** and **respiratory** syndrome **virus** (**PRRSV**) by indirect immunofluorescence with a set of 4 monoclonal antibodies to the nucleocapsid (N) protein and 2 other to the matrix (M) protein. In the present study, 9 Canadian isolates for which the sequences were determined appeared closely related to 2 U.S. reference strains (ATCC VR-2332 and ATCC **VR-2385**) with amino acid identities varying between 90 to 98% for the M and N proteins; substitutions in the nucleotide sequences were distributed randomly throughout the ORFs 6 and 7 genes, and most were 3rd base silent mutations. In comparison, more than 30% divergence was demonstrated with the Lelystad virus. Furthermore, differentiation between North American and European isolates, and between field isolates and the MLV strain could be achieved by cutting **PCR -amplified** products encompassing both ORFs 6 and 7 genes with 4 restriction endonucleases. When taken individually, BsaJI and AluI were the more appropriate restriction enzymes for distinguishing the vaccine strain from field isolates. The results obtained suggest that the restriction fragment length polymorphism of the genomic region covering the ORFs 6 and 7 genes may be a valuable tool to differentiate among **PRRSV** isolates.

L23 ANSWER 4 OF 5 MEDLINE on STN
ACCESSION NUMBER: 97294871 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9150544
TITLE: Temporal and morphologic characterization of the distribution of **porcine reproductive** and **respiratory** syndrome **virus** (**PRRSV**) by in situ **hybridization** in pigs infected with isolates of **PRRSV** that differ in virulence.
AUTHOR: Haynes J S; Halbur P G; Sirinarumitr T; Paul P S; Meng X J; Huffman E L
CORPORATE SOURCE: Department of Veterinary Pathology, College of Veterinary Medicine, Iowa State University, Ames, USA.
SOURCE: Veterinary pathology, (1997 Jan) 34 (1) 39-43.
Journal code: 0312020. ISSN: 0300-9858.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199707
ENTRY DATE: Entered STN: 19970721
Last Updated on STN: 19970721
Entered Medline: 19970708

AB Three groups of 5-week-old cesarian-derived, colostrum-deprived pigs were inoculated intranasally with either a high-virulence isolate (**VR2385**) or a low-virulence isolate (VR2431) of **porcine reproductive** and **respiratory** syndrome **virus** (

PRRSV) or with uninfected cell culture and media. Formalin-fixed, paraffin-embedded tissues from pigs euthanatized at 10, 21, and 28 days post-inoculation were examined by in situ **hybridization** for **PRRSV** nucleic acid using a digoxigenin-labeled antisense RNA probe approximately 1,000 nucleotides in length. Alveolar macrophages were positive in the lungs of 9/9, 2/2, and 0/2 **VR2385**-inoculated pigs and 7/9, 1/2, and 2/3 VR2431-inoculated pigs at 10, 21, and 28 days post-inoculation, respectively. More positive cells were detected in lungs from **VR2385**-inoculated pigs compared to VR2431-inoculated pigs at 10 and 21 days post-inoculation. Positive cells within lymph nodes were tingible body macrophages in germinal centers and macrophages or interdigitating dendritic cells within the paracortical area. **VR2385** was detected in the tracheobronchial lymph node (TBLN) and mediastinal lymph node (MLN) of 7/9 and 9/9 pigs at 10 days post-inoculation, but was only detected in the TBLN of 1/2 and 0/2 pigs and in the MLN of 0/2 and 1/2 pigs at 21 and 28 days post-inoculation, respectively. In contrast, VR2431 was detected in teh TBLN and MLN of 5/9 and 2/9 pigs at 10 days post-inoculation and in the TBLN of 0/2 and 1/3 pigs and in the MLN of 0/2 and 0/3 pigs at 21 and 28 days post-inoculation, respectively. There were more positive cells in TBLN and MLN in pigs inoculated with **VR2385** at 10 days post-inoculation. Macrophages located at the epithelial-lymphoid interface of tonsilar crypts and within the paracortical areas were positive in tonsils of 9/9, 2/2, and 1/2 **VR2385**-inoculated pigs and 7/9, 1/2, and 1/3 VR2431-inoculated pigs at 10, 21, and 28 days post-inoculation, respectively. Positive cells in the thymic medulla were multinucleate and were only detected at 10 days post-inoculation in 2/9 **VR2385**-inoculated pigs and 4/9 VR2431-inoculated pigs. Positive cells within the spleen were few, spindle-shaped, located within smooth muscle trabecula, and only present at 10 days post-inoculation in 3/9 **VR2385**-inoculated pigs. We conclude that the tissue tropism and distribution of positive cells within tissues is similar for **VR2385** and VR2431. However, tissues from more pigs and more cells within tissues were positive in pigs inoculated with **VR2385** than VR2431 at 10 and 21 days post-inoculation. These findings indicate that the more virulent isolate **VR2385** may replicate better in vivo than the less virulent isolate VR2431. This supports the hypothesis that an increased ability to replicate in vivo contributes to increased virulence of **PRRSV**.

L23 ANSWER 5 OF 5 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 95374360 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7646363
TITLE: Sequence analysis of open reading frames (ORFs) 2 to 4 of a U.S. isolate of **porcine reproductive** and **respiratory** syndrome **virus**.
AUTHOR: Morozov I; Meng X J; Paul P S
CORPORATE SOURCE: Veterinary Medical Research Institute, College of Veterinary Medicine, Iowa State University, Ames, USA.
SOURCE: Archives of virology, (1995) 140 (7) 1313-9.
Journal code: 7506870. ISSN: 0304-8608.
PUB. COUNTRY: Austria
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-U20788
ENTRY MONTH: 199509
ENTRY DATE: Entered STN: 19950930
Last Updated on STN: 19950930
Entered Medline: 19950920

AB The sequence of ORFs 2 to 4 of a U.S. isolate of **porcine reproductive** and **respiratory** syndrome **virus** (**PRRSV**), ATCC **VR2385**, was determined by analysis of a cDNA lambda library. The cDNA clones containing **PRRSV** specific sequences were selected using a **VR2385** ORF 4 specific **PCR** probe and sequenced. The ORFs 2, 3 and 4 overlapped each other and encoded polypeptides with predicted M(r) of 29.5 kDa (ORF 2), 28.7 kDa (ORF 3) and 19.5 kDa (ORF 4), respectively. No overlap was found between ORFs 4 and 5, and instead there was a 10 bp sequence which separated these two ORFs. The nucleic acid homology with corresponding ORFs of the European **PRRSV** isolate Lelystad virus (LV) was 65% for ORF 2, 64% for ORF 3 and 66% for ORF 4. Comparison of the ORF 4 sequences of **VR2385** with that of another U.S. isolate MN-1b revealed only 86% amino acid sequence homology and the presence of deletions in the ORF 4 of MN-1b. Our results further strengthen the observation that there is sequence variation between US and European **PRRSV** isolates.

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(FILE 'HOME' ENTERED AT 11:32:05 ON 08 AUG 2005)

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L14         3246 S L1 OR L2 OR L4 OR L5 OR L7 OR L8 OR L9 OR L12 OR L13
L15           67 S L14 AND (VR2385 OR VR(A)2385)
L16            1 S L15 AND PRIMER?
L17            9 S L15 AND PCR
L18            5 S L15 AND AMPLIF?
L19            1 S L15 AND POLYMERAS? (5A)CHAIN(5A)REACTION?
L20            1 S L15 AND HYBRIDI?
L21            1 S L15 AND CHAIN(5A)REACTION?
L22           10 S L16-L21
L23            5 DUP REM L22 (5 DUPLICATES REMOVED)
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